REMARKS

I. Status Summary

Claims 1-17 are pending in the present application. Reconsideration of the application based on the arguments set forth hereinbelow is respectfully requested.

II. Claim Rejections Under 35 U.S.C. § 102

Claims 1-5 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Applicants' Admitted Prior Art (hereinafter, "APA"). This rejection is respectfully traversed.

Claim 1 recites a process for back-surface grinding of wafers. The process includes applying a film, which has a support layer and an adhesion layer, by means of the adhesion layer side, to a wafer front surface. Further, the process includes carrying out a first photochemically initiated partial polymerization of the adhesion layer, with the result that the adhesion between the adhesion layer and wafer surface is reinforced. The process also includes grinding the wafer back surface and carrying out a second partial polymerization in the adhesion layer, with the result that the adhesion between the adhesion layer and the wafer surface is reduced. Further, the process includes pulling the film off of the wafer front surface. Applicants respectfully submit that the APA fails to teach each and every element recited by Claim 1.

The APA fails to teach carrying out a photochemically initiated partial polymerization of the adhesion layer, as required by Claim 1. The Examiner contends that the APA teaches "carrying out a first photochemically initiated partial polymerization of the adhesion layer" at page 2, lines 20-30, and page 3, lines 5-15, of

the present application. (Official Action, page 2.) Referring to page 3, lines 5-15, of the present application, the APA teaches only the general use of photopolymerizable adhesion layers. Further, referring to page 3, lines 8-11, of the present application, the APA teaches that the prior art adhesion layer is viscoelastic and fully polymerized by UV radiation. In contrast, Claim 1 recites carrying out a photochemically initiated partial polymerization of the adhesion layer. Thus, because the APA does not teach carrying out a photochemically initiated partial polymerization of the adhesion layer, applicants respectfully submit that the rejection of Claim 1 as being anticipated by the APA should be withdrawn.

Further, the APA fails to teach grinding the wafer back surface, and carrying out a second partial polymerization in the adhesion layer, with the result that the adhesion between the adhesion layer and the wafer surface is reduced, as required by Claim 1. The Examiner contends that these features of Claim 1 are disclosed at page 3, lines 15-30, of the present application. (Official Action, pages 2 and 3.) Referring to page 3, lines 15-30, of the present application, three prior art documents are summarized. The prior art documents teach adhesion layers containing compounds which can be radiation curable, thermally curable, or both. In contrast, Claim 1 recites carrying out a second partial polymerization in the adhesion layer, with the result that the adhesion between the adhesion layer and the wafer surface is reduced. The reduction of adhesion after grinding can be advantageous, for example, for assisting a clean removal of the film after use without damaging the surface structure or leaving residues on the surface structure. For these additional reasons, applicants

respectfully submit that the rejection of Claim 1 as being anticipated by the APA should be withdrawn.

Claims 2-5 depend from Claim 1. Therefore, the comments presented above relating to Claim 1 apply equally to claims 2-5. Thus, applicants respectfully submit that the rejection of Claims 2-5 under 35 U.S.C. § 102(a) be withdrawn and the claims allowed.

III. Claim Rejections Under 35 U.S.C. § 103

Claims 6-17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of European Patent Application Publication No. 0 359 373 to Komiyama et al. (hereinafter, the "Komiyama"). This rejection is respectfully traversed.

As previously stated, the APA does not teach each and every element recited by Claim 1. Specifically, the APA does not teach carrying out a photochemically initiated partial polymerization of the adhesion layer; grinding the wafer back surface; and carrying out a second partial polymerization in the adhesion layer, with the result that the adhesion between the adhesion layer and the wafer surface is reduced, as required by Claim 1. Further, applicants respectfully submit that the APA does not remotely suggest these features of Claim 1.

Komiyama fails to overcome the significant shortcomings of the APA. In particular, Komiyama does not teach or suggest carrying out a photochemically initiated partial polymerization of the adhesion layer; grinding the wafer back surface; and carrying out a second partial polymerization in the adhesion layer, with the result that the adhesion between the adhesion layer and the wafer surface is reduced, as

required by Claim 1. Referring to page 3, lines 23 and 24, of Komiyama, Komiyama teaches that the invention comprises a base sheet **2** and an adhesive layer **3** formed on one surface of base sheet **2**. Adhesive layer **3** is applied to a semiconductor wafer **A**. (Komiyama, page 5, line 27.) Next, wafer **A** is diced with adhesive layer **3**. (Komiyama, page 5, lines 28-31.) Adhesive layer **3** is then irradiated with energy beam **B** to polymerize adhesive layer **3**. (Komiyama, page 5, lines 37-42.) Komiyama further teaches that the adhesive composition of adhesive layer **3** may be cured by irradiation with the energy beam and the cured adhesive layer **3** is capable of developing tackiness again by heating. (Komiyama, page 6, lines 23-25.) There is no disclosure or suggestion in Komiyama of carrying out a photochemically initiated partial polymerization of the adhesion layer; grinding the wafer back surface; and carrying out a second partial polymerization in the adhesion layer, with the result that the adhesion between the adhesion layer and the wafer surface is reduced, as required by Claim 1.

Further, applicants respectfully submit that Komiyama teaches away from a second polymerization in the adhesion layer for reducing the adhesion between the adhesion layer and the wafer surface, as required by Claim 1. Komiyama teaches that the adhesive in the adhesive layer is curable with an energy beam and develops tackiness again when reheated. (Komiyama, Abstract, and page 2, line 58, to page 3, line 5.) Thus, Komiyama teaches away from a second polymerization in the adhesion layer for reducing adhesion of the adhesion layer. It is therefore respectfully submitted that one of ordinary skill in the art would not be motivated to combine the APA and Komiyama to achieve the process recited by Claim 1.

Claims 6-17 depend from Claim 1. Therefore, the comments presented above relating to Claim 1 apply equally to Claims 6-17. Accordingly, because of the dependency of Claims 6-17 on Claim 1, applicants respectfully submit that the rejection of Claims 6-17 under 35 U.S.C. § 103(a) be withdrawn and the claims allowed.

CONCLUSION

In light of the above remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.

DEPOSIT ACCOUNT

The Commissioner is hereby authorized to charge any fees associated with the filing of this correspondence to Deposit Account No. **50-0426**.

Respectfully submitted,

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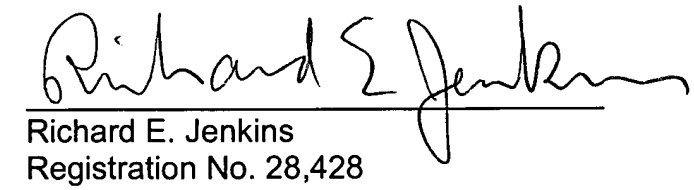
Date: April 13, 2005 By: 

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